The sixty years crisis

A short history of a huge problem



Part 3 Gaia Compiled by Carl Ohlen

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What is Gaia?

James Lovelock the originator of the Gaia Hypothesis got his idea when he studied the possibilities for life on Mars. What is life? How does it evolve? What he realized was that it order to understand life we have to look at the whole. Everything depends on everything else. He saw the entire living matter earth "from whales to viruses as one single entity, capable of manipulating its environment to suits its need".

He described the Earth's biosphere, atmosphere, oceans and soil as one "feedback" or "cybernetic" system - designed to maintain a chosen environment. Life is self-organizing and creates the condition for life. It has created a planetary life support system with an extremely thin protecting atmosphere, with plants using the photosynthesis with sunlight for energy and produce the oxygen we need and the water cycle from oceans to land. But in a short time we have altered some of our planets major chemical cycles. We have increased the carbon, nitrogen and sulphur emissions, the flow of toxins into our air, water and food chains. And now we even alter the genetic code of if itself. Something we have no idea at all how it would affect life. We have altered the stability of Gaia and may experience a very unpleasant rollercoaster ride between some extreme conditions.

Lovelock concludes:

"It all depends on you and me. If we see the world as a living organism of which we are a part – not the owner, nor the tenant; not even a passenger – we could have a long time ahead of us and our species might survive for its "allotted span".

What is God?

Jews, Christians and Muslims have all the common the story of creation in our Bible. "In the beginning God created the heavens and the earth." Later came the land and sea, plants and trees. This process took four days. And on the fifth day God created the animals. "So God created the great creatures of the sea and every living and moving thing with which the water teems, according to their kinds and every winged bird according to its kind. On the sixth day God said "Let the land produce living creatures according to its kind."

On the sixth day God created man i his own image to "be fruitful and increase in number, fill the earth and subdue it." An so we have done! But there was one condition. Not to eat from the tree of knowledge. But Adam did and here we are: "Cursed is the ground because of you..." Then most of know the story how "The Lord saw how great man's wickedness on earth had become" and created the great flood to punish us.

We may have many definitions but the concept of God is universal. The natural man knew "The Great Spirit" as part of everything. It does not really matter if we believe in God and religion or Gaia and science because they are all telling us the same story.

We are ONE.

We are all connected through a common history and a common destiny. There are certain natural laws of nature and independent if we believe in God and/or Gaia we are going to be punished if we break these laws.

Gaia – our living planet

5 000 000 000 years ago

Planet Earth started to be created from a cloud of dust

500 000 000 years ago

The first plants and animals

50 000 000 years ago

our continents and mountains are created and mammals populate the new world

5 000 000 years ago

Our present mammals develop such as horses and monkeys

500 000 years ago

The human race evolves in Africa

50 000 years ago

Homo sapiens, populates the world

5000 years ago

The first civilization in Mesopotamia between the rivers of Tigris and Euphrates.

500 years ago

The Europeans discover America and that we live on a round planet - Earth

250 years ago

The Europeans are "globalizing" our planet through slave trade and colonization when "the new world" in Americas with its people, culture and nature is being devastated

50 years ago

Our generation is the first to experience the TV, the PC, Jet planes, Space shuttles and the first to have generated so much pollution that we are endangering the very foundation of life

Think for a short moment about Gaia

Our earth needed 5 billion years to create all the wonderful life forms which today is our living planet that we also call Gaia. 5 000 000 000 years is a very long time.

- This is very difficult to understand.

Our civilisation was born in Mesopotamia 5000 years ago. Also this is a long time which is difficult to grasp. It is equal to about 100 human generations of 50 years.

Some 500 years ago man understood that we all were living on one rotating planet but we still believed that this Earth was created 4004 B.C until 150 years ago when the scientific and industrial revolution changed our world completely in a very short timeperiod. Still when my own grandfather was born neither electricity, cars nor airplanes had been invented.

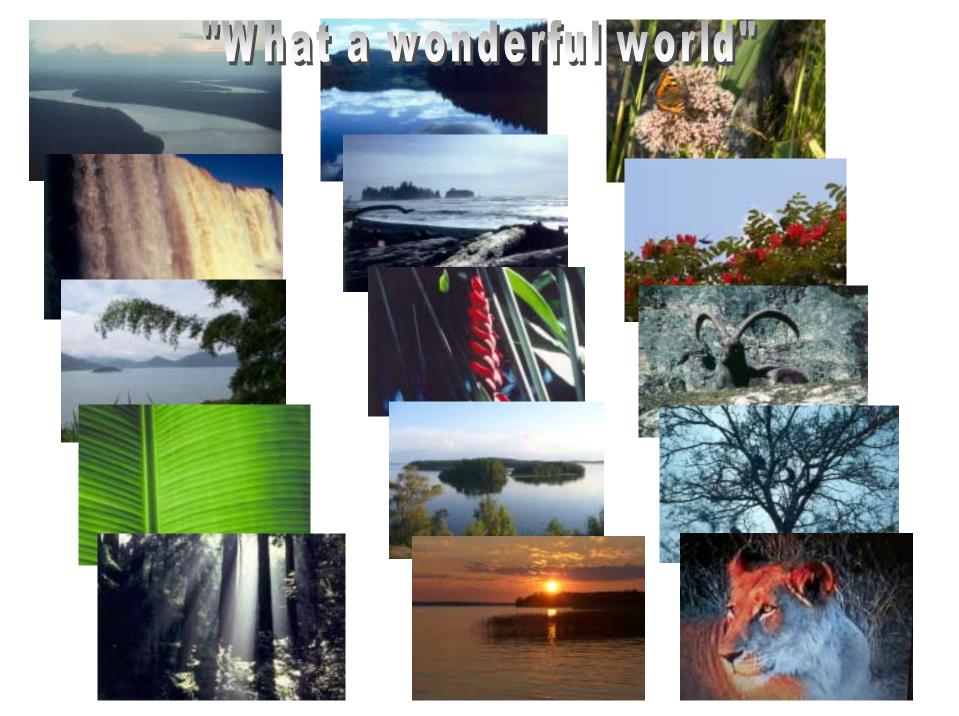
One day is equal to 24 hours which is equal to $24 \times 60 \times 60 = 86 \times 400$ seconds. One year is equal to $365 \times 6400 = 31 \times 356 \times 600$ seconds.

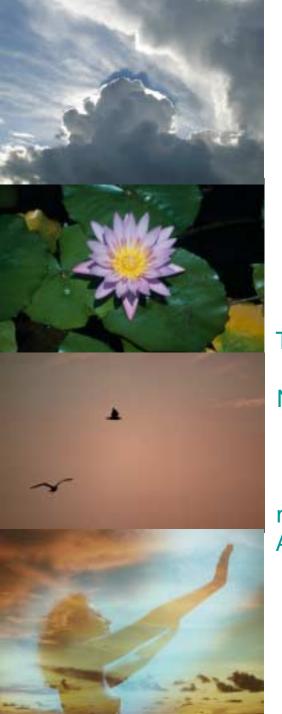
If we imagine our world to be created the first of January this year our civilisation is born on December 31 at 23.59 and 31 seconds before midnight. Half a second before midnight we begin burning the oil for cars and airplanes that now is destroying our planet.

Half a second of a whole year! In such a very short time we have managed to severely damage our common planet – Gaia.

- This is very difficult to understand!

In the beginning God created the heavens and the earth





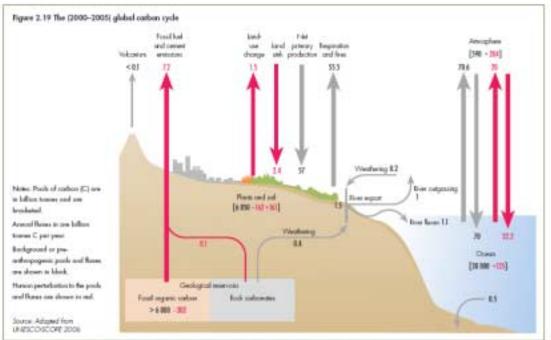
A sacred experience

When was a small boy I got a book about the sea for Christmas. It was written by Rachael Carson several years before she wrote "Silent Spring". She was telling the story about how life was created out of the water and how "everything is connected". I was thrilled. This book was more exciting than the usual adventures. Maybe it is because I was very fortunate to grow up in the country and in my own garden of Eden with rivers and forests but I have always been "connected" like my ancestors and their ancestors to Nature. The rebirth of Mother Earth every spring or after a desert rain is a sacred experience. Each flower is a wonder. The smell of Nature is intoxicating. The sound of birds singing is stimulating.

Our planet, Mother Earth or Gaia is something unique in Universe. Science has explained many things and invented many fantastic things. But life is a mystery. A beautiful mystery. And a very sensitive mystery. In fact both science and the Bible tells us a similar story with time as the main difference. Independent if you believe in God and the creation or Darwin and the evolution it is still the same mystery. And the result is the same beauty with built in intelligence that James Lovelock call Gaia – our living planet.

The delicate balance

Our living planet consist today of millions of different species who all interact. Each life form exist for a reason . We are all connected in the dance of life. The interaction between water, air, soil and living species has evolved under billion of years. And this life is concentrated to an extremely thin layer around our Earth. Humans and other animals need oxygen and exhaust carbon dioxide which is used by the plants who produce oxygen. This is done in an extremely delicate balance. A balance that we now have disturbed. Such disturbances has occurred before such as when the dinosaurs went extinct. And natural evolution is constantly changing nature. But that one species = homo sapiens during such a short time period has managed to completely upset this delicate balance is unique – and very scary.





The sudden death!

Billions of years with evolution has created this complex living surface that is protected and sustained by a very thin shell separating us from the Universe. This narrow skin has created the climate ideal for life. The only thing we know for sure about the weather is that it will change tomorrow. Despite our satellites and super computers we cannot for sure forecast the weather a few days ahead. And we cannot for sure forecast the future. But what our scientists now have recognized is that the climate will change drastically. And it goes very fast. In the beginning of 2008 new satellite images shows that the polar ice is disappearing faster that expected.

Where I live in Sweden we normally in February has the coldest period with half a meter of ice on the lake and half a meter snow on the ground.

This year is the warmest ever recorded – no winter at all.

Nature is since long tuned to a certain climate with slow change. Plants, seeds, birds, insects are arriving according a preset time table. Currents in the sea depends on this balance. When the white ice and snow no longer reflects the sun the warming will accelerate. This affect life in the sea. It is all interconnected.

Saving Gaia?

For 40 000 years man lived in a sustainable way on earth as gatherers and hunters like the primates before us. In California and Brazil the native population lived the same way in harmony with the nature for just two generations away. This is the "normal" homo sapiens.

When we started cultivating nature and building cities in Mesopotamia 5000 years ago we also separated from Nature like the stories in Gilgamesh and the Garden of Eden in our Bible. Still the farming homo sapiens lived within the sustainable limits of his farm or small village as late as when I grew up in Northern Sweden. We lived by the yearly circle of nature. We had cows for milk but we did not grew and kill beef broilers to slaughter for Hamburgers.

The big change was when man started mining all sorts of ores, digging for coal and drilling for oil. When we saw nature as a resource that was free to use. When also farming became industrialized and we cut down our forests in North America, killed the buffalos and native Indians to build our new world order. Now this process is accelerating in Brazil and Indonesia so we can grow soya and palm oil, produce beef for our growing global market. We do not need to save Gaia. We need learn to become part of nature again. To learn to live with nature - not control nature. We need to save ourselves.

Saving Ourselves

What is difficult to understand is how the human race after living with nature for so many generations all of a sudden has become alien to Mother Earth. In one single generation many of us have lost this connection and now new generations are born "Urbanized" without it. Instead we are sitting hours in traffic jams smelling the pollution or fighting our way through an overcrowded subway. In the rich countries an overwhelming majority lives in the city. We watch television for hours or surf the Internet. We carry advanced cell phones or plug our ears with music so we can stay connected with our virtual world but disconnected from Nature.

This change has taken place very fast. I know because I am part of it. When I was young we spent our vacation and free time in the nature. Camping, tracking, canoeing, bicycling, fishing. We grew our own vegetables and picked our own berries. Now we go shopping or for dinner in the city. We fly to a nice beach somewhere to stay in an air conditioned hotel. And if we are rich we can even fence ourselves from the rest of the world in a nice house with our television and computer. Sometimes we watch a program by David Attenborough and think it would be nice to go on a Safari in Africa or buy a tree in the Amazon rain forest.

The new Information and Communication Technology has many benefits for us to "Network" without the need to fly or us the car. But the urbanized life style now taking over will disconnect us even more from Nature and a natural life style. The real "Networking" is within Nature and we need to find our way back "Home"!



















These are the words of chief Seattle who in the 19th century experienced how the white man invaded America, exterminated the native population of humans, animals and trees to build the new manmade world:

"How can you buy or sell the sky, the warmth of the land? The idea is strange to us. If we do not own the freshness of the air and the sparkle of the water, how can you buy them?...We know that the white man does not understand our ways. One portion of the land is the same to him as the next, for he is a stranger who comes in the night and takes from the land whatever he needs. The earth is not his brother, but his enemy, and when he has conquered it, he moves on. He leaves his fathers graves, and his children's birthright is forgotten....He treats his mother, the earth, and his brother, the sky, as things to be bought, plundered, sold like sheep or bright beads. His appetite will devour the earth and leave behind a desert....

Teach your children what we have taught or children, that the earth is our mother. Whatever befalls the earth befalls the sons of the earth. If man spit upon the ground, they spit upon themselves. This we know- the earth does not belong to man, man belong to earth. All things are connected like the blood, which united one family. Whatever befalls the earth befalls the sons of the earth. Man did not weave the web of life: he is merely a strand in it. Whatever he does to the web, he does to himself...

What is man without the beasts? If all the beasts were gone, men would die from great loneliness of spirit, for whatever happens to the beasts also happen to man.

All things are connected. Whatever befalls the earth befalls the children to the earth."